



NSF Campus Cyberinfrastructure PI and Cybersecurity Innovation for Cyberinfrastructure PI Workshop

October 3-4, 2017 | Albuquerque, NM

NSF Program: CC*DNI

Award Number: 1541270

Program Area: Campus CI Engineer

PI: Brad Smith, UC Santa Cruz

co-PI: Mary Doyle, UC Santa Cruz

**Project Title: Extending the UC Cyberinfrastructure through
Innovation in Engineering**

Project Goals:

- Collaborate with [ISSDM](#) researchers to integrate [Ceph](#) storage system into UCSC's Science DMZ.
- Work with campus researchers to identify their CI needs and integrate new CI technology into their research workflows.
- Work with the CI community ([PRP](#), [CENIC](#), etc.) to disseminate and identify new CI tools, techniques and models.



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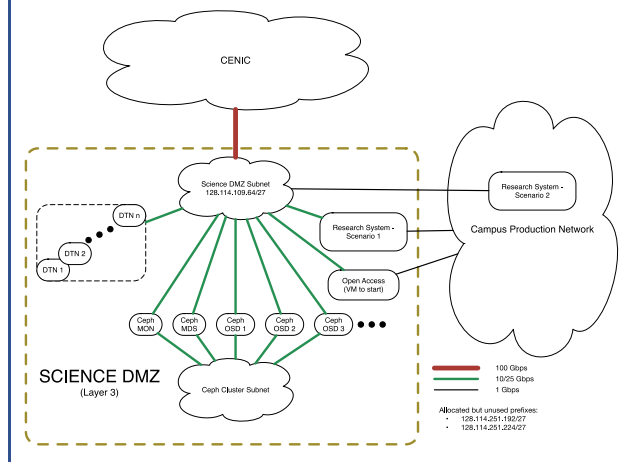
Quad Chart for: *Extending the UC Cyberinfrastructure through Innovation in Engineering*

Challenge or Approach:

- Identify and assess IT with the potential to enhance or transform research activities.
- Build research CI based on IT that proves to have value to research.
- Implement Science DMZ to support modern (i.e. BIG) Data Science

Solution(s) or Deliverables:

- Hire cyberinfrastructure Engineer to track, assess and experiment with IT that offers promise for research; engage with faculty to integrate new technologies into their research; engage with broader CI community.
- Modern Science DMZ with high performance distributed filesystem, HPC cluster, and dedicated ML servers).



Scientific Impact or Broader Impact:

- Support of existing big data science applications: Genomics, Astrophysics, MCD Biology.
- Integration with campus HPC cluster which supports developing research activities.
- Engagement in broader community to develop CI ecosystem.

Metadata tag:

- <http://manjusri.ucsc.edu/> - Blog documenting our work to add Ceph cluster and ML nodes to the Science DMZ.
- Draft UCSC ITS [Science DMZ](#) service page. This is being translated to an [ITS service](#) web site.